MARSHALL STAR

Marshall Space Flight Center — *July 26, 2001*

Inside the Star

Second hot-fire test of aerospike engine technology for SLI a success

Stennis release

The Stennis Space Center, Miss., has successfully completed the second test in a three-part series for a Space Launch Initiative (SLI) test program of the Electro-Mechanical Actuator (EMA) technology used on the former X-33 program's Linear Aerospike XRS-2200 flight engine set. The July 23 test achieved 80 percent power-level and went the full scheduled duration of 25 seconds.

The Marshall Center manages the Space Launch Initiative for NASA. It is a research and technology development effort designed to substantially improve safety and reliability, and reduce the high cost of space travel.

The test series is a unique opportunity for NASA to effectively gain valuable experience and data from existing commercial technology.

EMAs electronically regulate the amount of propellant (fuel and oxidizer) flow in the engine. The technology is a potential alternative and improvement to the older hydraulic-fluid systems currently used by the aerospace industry to drive and control critical rocket engine valves.

All test objectives appear to have been met, pending final data review. Post-test inspections are in-work.

The third and final test in this series is planned to occur in about two weeks.

Additional information on NASA's Space Launch Initiative is available on the Internet at:
http://www.slinews.com

STS-105 to feature new ISS crew, logistics module

The next Space Shuttle mission will feature the second rotation of astronauts and cosmonauts and the third flight of an Italian-built module delivering materials to the International Space Station (ISS).

See Space Flight Awareness honorees on pages 6-7

Designated STS-105, the mission on Space Shuttle Discovery, scheduled for launch no earlier than Aug. 9, will involve three crews. They are the four-member crew of Discovery, the three members of the Expedition Three crew to be launched to the Space Station, and the three members of the Expedition Two crew returning to Earth aboard the Shuttle.

The crew exchange is the second for the permanently inhabited outpost, and the logistical module, Leonardo, is making its second flight carrying additional scientific racks, equipment and supplies. An identical module named Raffaello has flown once. The Marshall Center manages the modules.

Crew members for Expedition Three are Commander Frank Culbertson; Pilot Vladimir Dezhurov; and Flight Engineer Mikhail Tyurin.

NASA photo

Atlantis lands safely

Silhouetted against the bright lights at the Shuttle Landing Facility, Atlantis prepares to land on Runway 15 to complete the 12-day, 18-hour, 34-minute-long, STS-104 mission. This is the 18th nighttime landing for a Shuttle, the 13th at Kennedy Space Center in Florida.

Letters to the editor

CASA thanks CFC contributors

Dear CFC contributors,
Thank you very much for your recent donation to CASA — Care Assurance System for the Aging and Homebound — of Madison County through the Combined Federal Campaign.

Because of your support, CASA will be able to continue to provide the services that enable our elderly and homebound clients to live as independently and safely as possible. Every year, through dedicated volunteers and donated funds, CASA is able to touch the lives of thousands of senior citizens and homebound persons.

Through individuals willing to give of their time and resources, CASA was able to provide services to 8,687 elderly or homebound clients in Madison County in 2000. CASA ramp teams built 108 wheelchair ramps, and installed 105 grab bars and handrails. In 2000, the CASA Community Garden produced 18,612 pounds of vegetables, which volunteers delivered to elderly and homebound persons throughout Madison County. In addition, volunteers weatherized more than 273 homes throughout the community during the 2000 TEMP$ weatherization program.

Thank you for your support of our agency, and for your outstanding service to the elderly and homebound of Madison County.

Sincerely,
Ann N. Anderson, Executive Director,
CASA of Madison County

Community Health Charities says 'thank you'

To all of the federal, civilian and military employees who supported last fall's Combined Federal Campaign, and especially those who designated their gift to the Community Health Charities and its member agencies in Alabama, we take this opportunity to express our heartfelt appreciation. With all of the results now in, the total amount pledged in the nine Alabama Combined Federal Campaigns, $772,903.12 was pledged to the Community Health Charities, which included undesignated funds, reflecting an increase of $94,459.93 — 13.92 percent — over last year. Contributions to Community Health Charities and its member agencies are used for lifesaving medical research, numerous patient/client service programs, medical symposia and public education efforts that enable us to lead healthier, more productive and happier lives. Your generosity is greatly appreciated.

President Bush marks Viking's silver anniversary

I am pleased to send warm greetings to those gathered to celebrate the 25th anniversary of the first soft landing of a spacecraft on Mars.

On July 20, 1976, the world saw the first close-up pictures of the barren, rocky surface of Earth's nearest planetary neighbor. These images, broadcast by the American spacecraft Viking 1 from its perch on the Martian surface, gave us an inspiring look at this remarkably beautiful planet. Today, the Mars Odyssey spacecraft is on its way to Mars to continue our exploration of the planet. Spacecraft like the Odyssey will allow us to explore beyond the horizons that Viking first showed us 25 years ago.

Like our previous space explorations, the exploration of Mars brings out the best in Americans. It challenges us to learn, to strive, and to achieve dreams that were impossible for earlier generations. Space exploration reminds us of our past great accomplishments, but it also reveals that America's greatest days of achievement in space still lie ahead.

I commend those at NASA for your dedication to science in commemorating this important date. Your work increases the knowledge of our universe and benefits future generations.

Best wishes for a memorable 25th anniversary celebration.

—George W. Bush

Chandra detects halo of hot gas around Milky Way-like galaxy

Marshall release

Astronomers using the Marshall-managed Chandra X-ray Observatory found the first unambiguous evidence of a giant halo of hot gas around a nearby, spiral galaxy much like our own Milky Way. This discovery may lead to a better understanding of our own galaxy, as well the structure and evolution of galaxies in general.

A team of astronomers, led by Professor Daniel Wang of the University of Massachusetts, Amherst, observed NGC 4631, a spiral galaxy approximately 25 million light years from Earth with both Chandra and NASA's Hubble Space Telescope.

While previous X-ray satellites have detected extended X-ray emission from this and other spiral galaxies, because of Chandra's exceptional resolution this is the first time that astronomers were able to separate the individual X-ray sources from the diffuse halo. Chandra found the diffuse halo of X-ray gas to be radiating at a temperature of almost 3 million degrees.

The Chandra image reveals a halo of hot gas that extends for approximately 25,000 light years above the disk of the galaxy.

Images associated with this release are available at:
http://chandra.harvard.edu and http://chandra.nasa.gov

Elaine Duncan's childhood love of space led to NASA career

by Tracy McMahan

As a little girl growing up in Montgomery, Elaine Flowers was more likely to be looking up at the stars than down at the flowers. She's still doing that today: last week, Elaine Flowers Duncan watched as astronauts unloaded a special carrier that she helped prepare for flight on the Space Shuttle Atlantis' trip to the International Space Station.

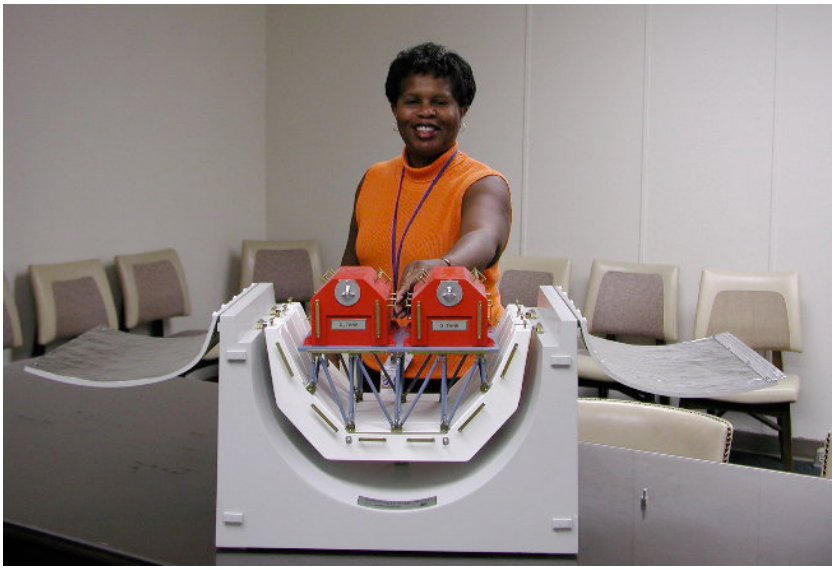
"My friends and family always considered me 'spacey' and 'out there' as a child," said Duncan, project manager for the Spacelab Pallet in Marshall's Flight Projects Directorate. "I like working for NASA because I can be 'out there' — working on 'spacey,' cutting-edge technology that makes a real difference here on Earth."

On July 12, the Spacelab Pallet — managed by Duncan and her team at the Marshall Center — was launched on the Space Shuttle Atlantis, STS-104 mission. It safely carried a new air resupply system to the International Space Station inside the Shuttle's cargo bay. Duncan's team customized the pallet to carry the special, high-pressure gas system that will repressurize the new U.S. airlock — a doorway for astronauts to use during space walks, also delivered last week by the Shuttle.

"It's great to see the hardware — hardware that did such a good job supporting Spacelab science payloads on the Shuttle — continue the tradition by carrying major components to our newest research facility," said Duncan.

By reusing the Spacelab Logistics Pallet and taking advantage of the Marshall Center's 20 years of successful experience assembling and operating unpressurized carriers, Duncan and her team are making it less expensive to transport Space Station components.

"We performed all the engineering, including design, development, test and evaluation of the flight support equipment and the pallet to carry the hardware safely on the Shuttle to the Station," said Duncan.



Duncan displays a model of the pallet her team developed.

During the Shuttle mission, the Spacelab Pallet team worked at the Engineering Support Room located inside the Payload Operations Center — the command post for Space Station science operations at the Marshall Center.

On July 15, astronauts completed the first space walk — successfully attaching the airlock to the Space Station. During the next space walk July 17, astronauts installed the first two high-pressure gas tanks. While the Shuttle was docked with the Station, the arm was used to pick up the tanks and lift them off the pallet. Astronauts then attached the tanks to the Station.

The second set of oxygen and nitrogen tanks were removed from the pallet and installed on the airlock during a space walk July 19. Atlantis brought the reusable pallet home when it returned. Duncan's team worked on special mechanisms to make it easier for the arm to remove the gas tanks from the pallet and place them near the Station.

Before working on this special Space Station delivery, Duncan had plenty of experience planning and carrying out operations in space. When she joined NASA in 1980, she worked at the Marshall Center as an operations engineer planning experiment operations for several Spacelab missions — flights of a science laboratory inside the Shuttle's payload bay. In 1988, she served at NASA Headquarters in Washington, D.C., as a program manager who helped plan future operations aboard the Station.

In 1993, NASA selected Duncan as an outstanding role model in science and engineering, and she participated in a traveling museum display viewed across the United States. She especially enjoys inspiring children to pursue careers in science and engineering.

"I've always loved science and mathematics," said Duncan. "I want other children growing up in Alabama to know that working hard at what you love is enjoyable and rewarding."

Duncan earned a bachelor's degree in mathematics from Alabama State University in Montgomery in 1976, and a master's degree in urban systems engineering from Howard University in Washington, D.C., in 1980. She is a graduate of Jefferson Davis High School in Montgomery.

Duncan, her husband Donald Duncan and their two children, Wesley and Jasmine, reside in Huntsville.

The writer, employed by ASRI, supports the Media Relations Department.

Engineering Directorate picnic honors employees' accomplishments

More than 200 Engineering Directorate employees and contractors were recognized July 18 for their outstanding contributions in the categories of technology achievement, safety and group achievement.

In addition, 80 Peer Awards were given to individuals selected by their co-workers for dedicated excellence. A picnic barbecue at the Marshall Center picnic grounds followed.

Winners of the door-prize drawing for items from the NASA Exchange are Paul Bookout, James L. Smith, Carolyn Holt, Kathleen Freestone, Marty Smith, Edwin Ricks and Mark Springer. All door-prize items were purchased from the NASA Exchange.

More information will be posted on the Engineering Directorate Web site.

Nelson Parker announces award winners.

Technology Achievement Awards:

Advanced Avionics Architecture for the Automated Rendezvous and Docking System: Thomas C. Bryan, David L. Kelly, Fred D. Roe
Advanced Manufacturing for Space Transportation Systems Technology Thrust Area for Composite Tank Manufacturing: Thomas K. DeLay
Advanced Structures and Materials for Thermal Management Coating Technology: Raj K. Kaul
Advanced Cryotanks Technology Thrust Area: Jeffrey L. Finckenor
Space Environmental Effects for Meteor Stream Forecasting: B. Jeffrey Anderson, William J. Cooke, Robert M. Suggs

Building Safety Awards:

Bill Boglio, Porter Clark, Cliff Kirby, David McGaha, Randy Stephens, Shawn Wallace

Peer Awards:

John D. Allen, Kathy Baker, Sheila Baker, Robert Bass, Don Biggs, Lisa D. Blue, Gayle Brown, Terry A. Brown, Stephen Clanton, Marceia Clark-Ingram, Kenneth S. Clifton, Kendal Coker, Mary B. Cook, Bill Cooper, Kenneth G. Cooper, Lisa Cooper, Chris J. Coppens, Eric L. Corder, James E. Coston, Dwight Cox, Jerry Crook, Dawn R. Cross, John C. Davis, Chris Doktor, Michele A. Farr, John Farrow, Jeffrey L. Finckenor, Rosemary S. Finley, Alan Garris, Gary Green, Trent H. Griffin, Tim Griswold, David A. Gwaltney, Patti G. Hall, Houston Hammac, Christopher Harbin, Belinda Hardin, Nadra T. Hatchett, Kathryn C. Hayden, William W. Hopkins, Lorna G. Jackson, Martin L. Johnson, Melinda C. Johnson, William G. Jones, Carl Justus, Kathy O. Kappus, Raj K. Kaul, Sarah J. Kent, Merle Kirch, Kirby G. Lawless, Timothy W. Lawrence, Jim J. Lindsay, Russell A. Littleton, John Lowery, Kathleen G. Lundy, Kathy Lutz, David S. McGhee, Michael Murray, Barron Q. Musick, Ronald L. Newby, Xavier Newby, Michael Norris, Martha O'Brien, James Robinson, Jose M. Roman, Joseph Scott, John R. Sharp, Robert M. Suggs, Michael W. Suits, Brenda J. Sutherland, Helen L. Thomas, Bruce K. Tiller, Jason A. Vaughn, Tony Vickery, Jason Waggoner, Kevin S. Wallace, David Wilkie, Jeffery Williams, Renee M. Wilson, and Robert J. Wingate

Engineering Directorate International Organization for Standardization (ISO) 9001 Internal Auditors:

Ronnie Akins, Steve Androlake, William C. Baker, Bryon Bartlow, Joseph Butler, Anita Cross, Steve K. Deutschendorf, Robert Engberg, Wayne Gamwell, Trent Griffin, Richard Hall, Fred Harrington, Carl Lester, Dave McGlathery, Melanie McCain, Karen McTaggart, Michael L. Mitchell, James Sledd, Mark Vaccaro, and Shawn Wallace

Engineering Directorate Organizational Chief Information Officer:

William C. Baker, John C. Davis, Steve K. Deutschendorf, Fred Harrington, Michael L. Mitchell, Karen McTaggart, and Paul Storey

Bill Kilpatrick, director of Engineering Directorate, addresses the crowd of nearly 1,300.

Kurt Jackson, Fred Roe and Tim Crumbley sign a Shuttle safety picture.

Space Transportation System (STS) – 97 Cable Anomaly Investigation:

Pravin K. Aggarwal, Roger K. Baird, Tony Clark, Rickey Clements, Ross Evans, David K. Hall, James D. Hodo, Raymond R. Keen, Gregory A. Jerman, Danny D. Johnston, Billy J. McPeak, Norman Pabon, Steve Payne, Glen Shelby, Dexter Strong, and Kevin C. Takada

Photos by Dennis Olive, NASA/Marshall Space Flight Center

Kathy Lundy, right, receives one of 80 Peer Awards presented by Bill Kilpatrick.

The crowd waits in line for barbecue plates at the picnic area.

Bill Kilpatrick, left, talks with Sheryl Kittredge, David Throckmorton and Amelia Gillis at the picnic area.

Flight Software Group Capability Maturity Model (CMM) Certification:

Charles Scott Akridge, Richard H. Beckman, Patricia A. Benson, Camille Binford, Amanda F. Boster, Carole B. Brandon, Terry A. Brown, Geoffrey Burton, Jerome Collins, Neill Cowles, Mike Craft, Jonathan W. Crisp, Jerry Crook, Robert T. Crumbley, Tim Deaton, Baraka J. Dillard, Clark Everetts, Michele A. Farr, Kevin Fleischmann, Johnny P. Griffin, Richard B. Hall, Chris Hauff, Douglas G. Hill, Geoffrey C. Hintze, Charles H. Horne, Tom Howsman,Yvette B. Johnson, Deborah Kromis, Glenda Lewis, Chris Matthews, Tami L. McGhee, George Mitchell, Michael Murray, Larry Newman, Valerie H. Parker, Jonathan D. Patterson, Lindsey Perry, Steven C. Purinton, Michael Rahmatipour, Louis C. Simeone, Euell C. Richardson, Charlotte Schrimsher, Rhonda Schrimsher, Teresa K. Scribben, Gray Settle, Keith C. Shackelford, Bill Skipworth, Judy Smith, Robert Stevens, Margaret C. Stroud, Larry K. Taormina, Evelyn Thomas, Luis C. Trevino, L. D. Wallace, Sorita B. Wherry, Catherine H. White, and Phil Williams

Vapor Compression Distillation (VCD) Flight Experiment (FE) Avionics and Actuators Development and Integration:

Sheila Baker, Don Biggs, Gerry Chase, Norma Dugal-Whitehead, Michele A. Farr, Don Fronek, David L. Geist, Jim R. Hall, Yvette B. Johnson, Donna K. Kaukler, Jeffrey L. Martin, Michael H. Rahmatipour, Terry S. Roberts, Michael W. Selby, Phyllis A. Smith, Kenneth L. Swords, Larry K. Taormina, Jeff Thomas, Kevin S. Wallace, and Bryan S. Worley

Block II Space Shuttle Main Engine (SSME) Structural Assessment:

Pravin K. Aggarwal, Greg Duke, Brian Goode, Donald Harris, Phillip Harrison, Katherine Mims, Wes R. Newman, Rene Ortega, Jeffery T. Rayburn, Jose Roman, Bill Quarels, Cynthia M. Stewart, Gregory R. Swanson

International Space Station Flight 6A Launch Deployment Assembly:

Bruce Askins, Ken Atchley, Sam Ayala, Phil Beason, Dave Berry, Barbara Breithaupt, Keith Chavers, Charlie Dischinger, Tim Driskill, Miria Finckenor, Charles Finnegan, Cindy Fortenberry, Doug Fox, Amos Glenn, Sheryl Kittredge, Jim Lindsay, Gregory A. Lackey, Richard Lamb, Rob Lambdin, Freida S. Lowery, John Lowery, Scott McCluney, Raj Mehta, Ward Overton, Jr., Alex Rawleigh, Mike Robinson, Brenda Sands, Tarek Sayyah, Manuel Schultz, Donna Severance, Gregory A. Tanner, Debra Terrell, Paul Thompson, Tim Thornton, Toan Vu, and Tim Walton

Plasma Interaction Testing for International Space Station:

Todd Schneider, Jason Vaughn, Ed Watts, and David Wilkie

In-House Manufacturing Assessment:

Ronnie Akins, Mark Anderson, John Bedford, Kendal Coker, Chris Crump, Ed Denson, Wayne Ellenburg, Patti Hall, Dick Lamb, Scott Moore, Mickey Stewart, Janet Washington, and Jerry Wright

NASA Technical Standards Program:

Brenda Bailey, Danny Garcia, Paul Gill, Joseph Jones, Brenda Lance, Buddie Martin, Leila Reed, Kalpana Shiva, and Darlene Springer

ARMY-NASA Virtual Innovations Laboratory (ANVIL):

Geoffrey S. Beech, Mark Blasingame,,Chris Daniel, Charlie Dischinger, Mariea C. Dunn, Samantha L. Estes, Joseph P. Hale, George S. Hamilton, Wendy W. Hulgan, William G. Jones, and Sally A. Richardson

2001 Awards Celebration Committee:

Amelia Gillis, Bill Baker, James Currie, Eddie Davis, Lana Fischer, Patti Hall, Whitney Hubbs, Sheryl Kittredge, Sally Ann Little, Freida Lowery, Dan Mellen, Ronda Moyers, Brenda Osmer, Sally Richardson, Brenda Lance, and William Vaughan

34 selected to attend STS-105 launch

Kenneth Arflack, CSC

Bruce Askins, ED38

Kaethe M. Buford, RS10

James M. Carter, SD70

Shirley S. Chandler, TD02

Judy S. Chapman, MP01

Dwight B. Clark, PS10

Peggy Duke, TBE

Teresa L. Durrette, HEI

Steve Evans, ED44

Anna J. Fowler, AD23

George Giller, Sverdrup

Cornelius Glorie, Pratt & Whitney

Nancy Hamilton, Pace & Waite

Orval E. Henson, MP21

Darlene Hill, QS10

Norman P. Hodges, DCAA

George LaCoe, FD40

Dana May, Sverdrup

Deborah L. McCullough, SD30

Ed Nelson, Pratt & Whitney

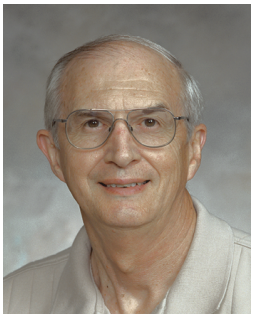
Kimberly D. Newton, PS50

Next Shuttle mission to deliver new crew to ISS

Thirty-four Marshall employees and contractors are being honored for their significant contributions to the space program. The honorees will be hosted by NASA at Kennedy Space Center, Fla., for the launch of STS-105, scheduled no earlier than Aug. 9. This mission will deliver the Expedition Three crew and the Leonardo logistics module to the International Space Station (ISS).

Louis V. Nosenzo Jr., CD02

John A. Nugent, TBE



Chuck Provence, CD10

Marilyn Ratliff, Pace & Waite

Greg A. Redman, NTI

Dennis A. Smith, ED17

Pam Smith, ED01

John E. Tepool, TD52

Ann S. Towry, SD02

Holly J. Walker, TD74

Pat L. Williams, OS01

Danny Xenofos, FD20

Photo by Emmett Given, NASA/Marshall Space Flight Center

Patrick Pecot, left, a senior dual degree major at Morehouse College in Atlanta, Ga., shares a laugh with his student, Violette Hawkins, during a recent tutoring session at Girls Inc.

Students helping students

The I.M.A.X. (Interns Mentoring and Accelerating Excellence) Math Tutoring Program was created by Equal Opportunity Office summer interns Brian Barnes of Morehouse College and Renita Montgomery of Spelman College, both in Atlanta. More than 30 summer interns provided math tutoring to more than 35 students at Girls Inc. over a six-week period.

Review questions help prepare for Safety Bowl

The 2001 Marshall Safety Bowl is fast approaching. This week's questions will help you prepare. For more questions, check "Inside Marshall."

1. Which of the following causes more deaths each year in this country: vehicle accidents, AIDS, breast cancer or medical errors?

2. According to statistics from the Federal Railroad Administration, were there more highway-rail grade crossing fatalities or more pedestrian/trespass fatalities involving trains in 2000?

3. True or False: The further the load is from the centerline of your body, the less the strain imposed on your back.

4. True or False: Clinical depression is a complex, debilitating disorder that affects more than 17 million adults in the United States each year.

5. How far should you stay behind a tractor-trailer when driving?
   A. Half the length of the trailer
   B. 1 foot for each 10 mph
   C. Far enough to see the truck's mirrors

Safety Bowl 2001

D. 10 feet

6. What markings indicate designated areas to go to in the event of tornado warnings?

7. True or False: When lifting an object, if you need to turn to the side, turn by moving your feet around and not by twisting at your stomach.

8. What warning sign at a railroad crossing has the same legal standing as a stop light?
   A. An advance warning sign
   B. A Crossbucks sign
   C. A flashing light
   D. The white line painted on the pavement

9. What percentage of skin cancers could be prevented by protecting skin from the sun's rays?

10. What is a Type A mishap?

Core Financial Project completes significant phase

The Integrated Financial Management (IFM) Program's Core Financial Project completed its Agency Design Phase June 29. Significant milestones were reached in all project areas, including process design, technology and change management.

One of the major milestones reached at the completion of the Agency Design Phase was the development of the Core Financial implementation sequence for NASA Centers other than Marshall, the Lead Center. This rollout plan was negotiated with each NASA Center and unanimously approved by the Core Financial Project Steering Committee.

A series of sessions being held from July to September will process scenarios developed in the Agency Design Phase through the configured Core Financial software to validate the preliminary process designs and configuration settings.

With the implementation of the Core Financial software, the Agency will have timelier, more consistent and reliable information for management decisions. It will also have improved accountability to enable full cost accounting.

This new process will help NASA achieve efficiencies and operate more effectively, thereby improving its information exchange with customers and stakeholders.

Upcoming tours heading to Grand Ole Opry, Memphis

Upcoming tours include The Grand Ole Opry in Nashville, Tenn., July 28. Cost is $40. The tour departs at 3 p.m. and returns at midnight. For 75 years, the sound of the Opry has been heard across America on Saturday night. Opry members pay their dues by performing at least once a year, so you never know who might show up! Bring your camera (no video, please).

On Sept. 8, take a tour to see "Eternal Egypt" at the Pyramid in Memphis, Tenn. Cost is $35. The tour departs at 6 a.m. and returns at 10 p.m.

This extraordinary exhibit of treasures and artifacts is presented in co-operation with the British Museum. The audio narration by Omar Sharif will transport you to another time and place and envelope you in the mystery of Egypt. This exhibit is part of the Wonders Series.

Recreation Center tours are open to the entire Redstone and NASA Community and are filled on a first come, first served basis.

For more information, call Wednesday through Friday after 1:30 p.m. or Saturday and Sunday from 10 a.m. until 6 p.m. at 876-4531.

Order Marshall's 2001 Family Fun Day T-shirt

Marshall's Aug. 25 Family Fun Day T-shirt is 50/50 yellow cotton/poly and has the NASA logo and "Marshall Space Flight Center" on the front left chest and the "2001 Family Fun Day" logo on the back.

Prices are:

- $8 for a child's T-shirt in small, medium or large;
- $10 for an adult T-shirt in small, medium, large and X-large;
- $11 for adult T-shirts in XXL or XXXL.

Include quantity of each shirt ordered and total price.

To order, send your name, address or office symbol, phone number and e-mail address to CD10XX, ATTN: Candy Bailey, NASA Exchange Space Shop, Bldg. 4203, room 1202. Payment must accompany order. Payment by mail may be made by cash or check made payable to NASA Exchange — MSFC. Payment may be made by VISA, MasterCard, Discover or American Express by taking your order form to the NASA Exchange Space Shop. Deadline to order is Aug. 10.

For more information, visit the Web at: *http://picnic.msfc.nasa.gov*

BACK

Photo by Doug Stoffer, NASA/Marshall Space Flight Center

First row, from left, are USRP coordinator Julie Mills with students Hannah Eucker, Scott Zagorski, Rachel McConnell, Eileen Velez, Sarah Chu, Curt Shirley and Tony Thomas. Second row, Dania Rossi, Jennifer Fagan, Yvonne Villegas, Chantelle Hurst, Elizabeth Coleman, Gennette Gill and Antonio Pitchford. Third row, Tiffany Dukette, Denise Edwards, Richard Birt, Zachary Owens, Eduardo Navarro, Andy Prescott, Andrew Schnell and Todd Forrest. Fourth row, Anthony Guido and Blair Unger. Not pictured: Dondi West.

Students conduct research at Marshall

The NASA Undergraduate Student Research Program (NASA-USRP) welcomes 25 participants from across the United States and Puerto Rico to the Marshall Center who were competitively selected to participate in its pilot year of the program.

The three primary elements of the program are: a research project to be completed by each participant under the supervision of a Marshall researcher who has assumed the role of a mentor for a 10-week period from June 4 through Aug. 10; technical lectures by prominent engineers and scientists; and completion of a technical report and presentation. Additional elements of this program include tours of Marshall's facilities and laboratories.

How much do you know about sunburn?

To test your sun safety knowledge, answer true or false to the following statements:

1. If you stay indoors all week and catch up on your tan on weekends, you don't need to be as concerned about too much sun exposure as someone who is outdoors more often.

2. People who have freckles and burn before tanning don't need to be especially concerned about getting too much sun.

3. Some UV rays are safe.

4. Taking acne medications, oral contraceptives containing estrogen, antibiotics or antihistimines doesn't increase your skin's vulnerability to sun exposure.

5. If you have darker skin, you don't need to be concerned about the dangers of exposing your skin to the sun.

6. A T-shirt offers sufficient protection from the sun, even when it's wet.

7. People who develop a fever, chills or an upset stomach after getting sunburned don't need to see a doctor.

8. You don't need to wear sunscreen if you wear a loosely-woven T-shirt over your bathing suit.

If you said all of these statements are false, you're incredibly bright when it comes to the sun safety. If you thought these statements were true, be careful of the sun, you may just get burned.

— The American Cancer Society

Obituaries

Fann, Margaret, died June 8. She retired from Marshall in 1975 where she worked as a secretary. She is survived by a son, Michael, and a daughter, Rita.

Gwin, Hal Sanders, 65, of Madison, died June 22. He retired from Marshall in 1994 where he was a supervisor in the Aeronautical Test Lab facilities. He is survived by his wife, Joy Hargett Gwin.

Gillespie, Reba C., 73, of Huntsville, died June 24. She retired from Marshall in 1976 where she worked as a secretary. She is survived by her husband, Alton Gillespie.

Knott, Don M., 79, of Huntsville, died July 3. He retired from Marshall in 1974 where he worked as a supervisor, electronics technician. He is survived by his wife, Terry Knott.

Hubble, Barbara A., 67, of Arab, died July 4. She retired from Marshall in 1994 where she worked as a secretary. She is survived by her husband, Kenneth Hubble.

Doud, Loxie L., 71, of Madison, died July 11. He retired from Marshall in 1989 where he worked as a program analysis officer. He is survived by his wife, Lynda Tate Doud.

Marshall picnic

Meal tickets are on sale for the Marshall Center's annual picnic — Family Fun Day — being held from 10 a.m.-3 p.m. Aug. 25 at the Marshall picnic area. Meal tickets — at $6 each — are on sale through admin officers. Tickets purchased by Aug. 1 will receive two door prize tickets in addition to the lunch ticket. Tickets purchased Aug. 2-17 will receive one door prize ticket. Retirees may purchase meal tickets from Bill Stafford at 544-0252 in Bldg. 4752.

History chat

This month marks the 30th anniversary of the first use of the Marshall-managed Lunar Roving Vehicle (LRV). Former LRV project manager, Sonny Morea, will share some of his experiences at 11 a.m. Friday in the Heritage Gallery in Bldg. 4203. Everyone is invited.

Rowgacki farewell

A farewell reception for Dr. Row Rogacki will be held from 4:30-6:30 p.m. Thursday in Bldg. 4200, room P-110.

Celebrating 1 million hours

Marshall's Space Transportation Directorate, marking 1 million hours without a lost-time accident, will celebrate from 11 a.m.-1 p.m. Thursday in Bldg. 4752. All directorate civil servants and contractors are invited to attend. Bus transportation will be available from Bldgs. 4203 and 4666 beginning at 10:30 a.m. For more information, call Debbie Scrivner at 544-5662.

AdminSTAR feedback session

On Aug. 2 from 1-2:30 p.m., an Electronic Meeting System session is scheduled in Bldg. 4200, room G13-F, to collect user input on AdminSTAR and identify potential enhancements for a future Learning Management System. The collected input will be presented to an Agency-level panel being convened the week of Aug. 20. A cross section of AdminSTAR users at the manager, administrative and employee levels are being sought to participate in this session. Individuals interested in participating are encouraged to contact John Heath in the Employee and Organizational Development Department at 544-2622 or by e-mail by Friday.

Small business opportunities

The Marshall Center's Technology Transfer Department is sponsoring a Minority- and Women-Owned-Business Industry Briefing at the Oakwood College Technology Complex from 8 a.m.-4 p.m. on Aug. 14. This briefing will inform small businesses of business opportunities available in both the government and area industry. Call Carolyn McMillan at 544-9151 for more information.

Online career resources

The NASA Headquarters Office of Human Resources and Education has purchased a NASA-wide subscription to Science magazine's Next Wave product that is now available to employees at the Marshall Center. Next Wave, a weekly on-line publication devoted to scientific training and career development, provides global news, profiles of emerging careers, and advice from experts and role models drawn from the international scientific community. Next Wave is located at: *http://nextwave.sciencemag.org/*

Sports

Fishing results

The MARS Fishing Club held its annual night tournament July 13. Charlie Nola and Ken Vadasy took top honors with a total of 8.77 lbs. Nola caught the tournament's big fish, which was a 4.59-lb. largemouth bass. Dale Hedden and Darrel Simonds placed second with 6.27 lbs. John Pea and Glenn Batchelor placed third with 6.08 lbs. The next scheduled tournament is Aug. 11 at Waterfront Grocery on Guntersville Lake. There will be a pre-tournament meeting on the Thursday before at noon in the Marshall picnic pavilion. For more information, call Don McQueen at 544-9073, Charlie Nola at 544-6367, or John Pea at 544-8437.

NASA Ski Week

The 11th Annual NASA Ski Week will be hosted at Banff/Lake Louise March 9-16, 2002. All Marshall employees, on-site contractors, retirees, and dependents are eligible to participate. Interested persons may call 1-233-0705 or e-mail *Thomas.S.Dollman@msfc.nasa.gov* for additional information.

Miscellaneous

Luau dinner dance

The MARS Ballroom Dance Club is holding a luau dinner dance from 6:30-11 p.m. Aug. 11 in the Von Braun Center East Hall. Music is by the Night Owls and Tina Swindell. Tickets for the Hawaiian casual event — at $18 each — can be purchased through Aug. 7 from club members Linda Kinney at 544-0563; Bob Williams at 544-3998; Hugo Berry at 544-3525; Pat Sage at 544-5427; Tamara Landers at 544-6818; Palmer Herndon at 534-7408; Joyce Davis at 880-2270; or Ed Ogozalek at 837-1486. Club members receive a $3 discount. To join, ask ticket sellers for an application.

Discount chorus tickets

Discount tickets are available to Marshall team members for the musical "Oliver" being presented by the Huntsville Community Chorus July 26-29 and Aug. 2-4 at 7:30 p.m., and July 28-29 and Aug. 4-5 at 2 p.m. at the Von Braun Center Playhouse. To receive a 10 percent discount, NASA employees, retirees and contractors must show their badge at the Huntsville Community Chorus Association office located at 3312 Long Avenue in Huntsville. For more information, call 533-6606.

Employee Ads

Miscellaneous

★ Ladies shoes, size 8, $10; punch bowl, $10; portable grill, new, $10; ladies jacket, $25. 534-0939
★ Tent camper, sleeps 6, $175. 881-1449
★ Lawn/garden tractor, 18HP, Kohler engine, 48" hyd. lift mower deck, 2-speed hydro-static transmission. 852-5446
★ Hotpoint washer and dryer, $160. 533-5942
★ Yamaha coronet w/hard case, $500 obo. 881-2676
★ Chromecraft dinette table w/leaf and four naugahyde chairs, $89. 881-9421
★ Nordic Track skier, $125. 256-498-0219
★ Mitsubishi CS-36309 stereo/TV w/ADV PIP, 36", $900 obo. 205-647-4949
★ Radio Shack HTX-245 amateur radio handheld transceiver, including 3 internal rechargeable cells, $140. 772-9168
★ Fisher Price kitchen complete w/play dishes and play food, $35. 656-8902
★ Ol' Man Vision tree stand, foot/gun rest, cushion seat, accessory bag, bow holder, $165. 883-6416
★ Yamaha drum set, 5-piece, three Zildjan cymbals, six carrying cases, $850. 895-2959
★ 1997 Honda Shadow VLX 600cc, garage kept, 10K miles, MSTA, $3,200 obo. 746-9080
★ Brunswick pool table, 1 yr. old, paragon oak w/cherry finish, navy blue felt, 1" slate, drop leather pockets, all accessories, $2,000. 509-3392
★ Kitchen table w/4 chairs, $80; computer desk, $40. 682-3089
★ 1997 Sea-Doo GTI, 3-seater, yellow/white, garage kept, canvas cover, $4,200. (256) 586-7797
★ Canning jars; $3/dozen quarts; $2.50/dozen pints; freezer containers, 10 cents each; file cabinet, 4-drawer, $20. 852-2936
★ Dresser w/mirror, $125; rocking chair, $45; recliner, $45; child's rocking horse, $25. 881-8674
★ Realistic DX-300 shortwave radio receiver, 0.5-30 MHz, AM, CW, USB, LSB, $80. 772-9168
★ Mosaic pool liner, 18x36, new, $900 obo; pool filter, 1 yr. old, $300 obo. 350-6667

Vehicles

★ 1995 Cherokee Jeep, Country, auto, 110K miles, leather, power windows/door locks, towing, $7,650 firm. (256) 753-2278
★ 1972 Chevy pickup truck, 6 cyl, 3-speed w/ heavy duty clutch, LWB, $1,000 obo. 882-0461
★ 1999 Honda Accord coupe, V-6, green w/ beige interior, 39K miles, $17,500 obo. 536-3390
★ 1995 Buick Park Avenue, 4S, leather, black, 80K miles, $10,500. 256-862-7206
★ 1997 Nissan Pathfinder, 4WD, 5-speed, white, $14,300. 256-534-4190
★ 1989 Deville, 2nd owner, garaged, white/ burgundy interior, 140K miles, $4,700. 837-5975
★ 1998 Pontiac Grand Prix GTP, 4-door, 56K miles, leather, CD changer, etc., green, $12,750. 536-3697
★ 1996 Millenia, power sunroof, green w/tan, leather interior, V-6, 62K miles, $11,500. 880-9025
★ 1999 Cougar, V-6, automatic, silver, AM/ FM CD w/6-disk changer, 38,700 miles, asking $13,250. 534-4841/leave message
★ 1969 Camaro, new 400 SB Chevy (500 miles), 4-speed Muncie, 3.73 rear-end gear, needs paint/upholstery, $9,000 obo. 509-3392
★ 1994 Mazda 929, leather, loaded, ivory w/ taupe, garage kept, all service records, 68K miles, $10,500. 880-0199
★ 1992 Ford Crown Victoria LX, 43K miles, silver, garaged, original owner, $5,400. 881-4229
★ 1998 Ford Mustang GT coupe, white w/ gray cloth, 5-speed, 4.6L, full-power, AM/ FM cassette/CD, 57K miles, $12,000 obo. 722-3432/256-586-7658

Free

★ Child's swing set, includes slide, glider, 2-swings, rocket rider, you remove. 772-3303

Wanted

★ Two tickets, Titans vs. Dolphins, 9/9/01. 544-4588
★ Old Chicago bricks to repair driveway culvert. 828-3834
★ Four old surfboards, do not need to be in good condition, need for high school band half-time show props. 355-6648
★ Old working TV to be used for kid's games. 971-0048

Answers

Continued from page 8

1. Medical errors
2. Pedestrian/trespass
3. False. The further the load is from the centerline of your body, the greater the strain imposed on your back.
4. True. Unfortunately, nearly two-thirds fail to recognize their illness and get treatment.
5. C. At least far enough back to be able to see the truck's mirrors.
6. Protected Area signs
7. True
8. C. A flashing light
9. 80 percent
10. A mishap causing death and/or damage to equipment or property equal to or in excess of $1 million.

Correction

The image on the front page of the Marshall Star in the July 19 issue was incorrectly identified as a Block II main engine. It is the new high-pressure fuel turbo pump which is part of the Block II main engine.

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